

TABLE OF CONTENTS

I. POWER POINT PRESENTATION

II. TABLES

- 1 Summary of RFI Soil Characterization Program
- 2 Summary of RFI Soil QA/QC Program
- 3 Groundwater Monitoring Program – Initial Event
- 4 Groundwater Monitoring Program – Second Event
- 5 Summary of RFI Groundwater QA/QC Program – Initial and Second Events
- 6 Summary of RFI Groundwater Monitoring Well Construction
- 7 Summary of Survey Data – RFI Soil Sampling Locations
- 8 Summary of Survey Data – RFI and Existing Groundwater Monitoring Wells
- 9 Summary of RFI Groundwater Elevations
- 10A Summary of Soil Analytical Results – SWMU 1
- 10B Summary of Soil Analytical Results – SWMU 5
- 10C Summary of Soil Analytical Results – SWMU 16
- 10D Summary of Soil Analytical Results – SWMUs 21, 22, and 30
- 10E Summary of Soil Analytical Results – SWMU 23
- 10F Summary of Soil Analytical Results – SWMU 27
- 10G Summary of Soil Analytical Results – SWMU 28
- 10H Summary of Soil Analytical Results – AOC 1
- 10I Summary of Soil Analytical Results – AOC 3
- 10J Summary of Soil Analytical Results – AOC 4
- 10K Summary of Soil Analytical Results – QA/QC (Aqueous) Rinsate and Trip Blanks
- 11 Summary of Groundwater Analytical Results – February 2003 Event
- 12 Summary of Groundwater Analytical Results – July 2003 Event
- 13 Soil Analytical Results, Existing SWMUs/AOCs, Data Evaluation/Phase II Recommendation Summary
- 14 Groundwater Data Evaluation Summary – Recommended Phase II Activities
- 15 Additional SWMUs/AOCs South Plant – Recommended Phase II Activities

III. FIGURES

- 1 Site Location Map
- 2 Detailed Site Plan
- 2A Detailed Site Plan – North Plant
- 3 RFI Soil Sampling Locations/Results
SWMU 1 – North Phosphoric Acid Storage Pond
- 4 RFI Soil Sampling Locations/Results
SWMU 5 – Spar Building Storage Area
- 5 RFI Soil Sampling Locations/Results
SWMU 16 – Past Landfill Area IV
- 6 RFI Soil Sampling Locations/Results
SWMUs 21, 22, and 30 – Past Landfill Area IX, Past Landfill Area X and Former East and West Lagoons

TABLE OF CONTENTS (CONTINUED)

III. FIGURES (continued)

- 7 RFI Soil Sampling Locations/Results
SWMU 23 – Past Landfill Area XI
- 8 RFI Soil Sampling Locations/Results
SWMU 27 – Environmental Protection Station
- 9 RFI Soil Sampling Locations/Results
SWMU 28 – Hypo Muds Accumulation
- 10 RFI Soil Sampling Locations/Results
AOC 1 – Tank 15 Spill Area
- 11 RFI Soil Sampling Locations/Results
AOC 3 – Pesticide Investigation/Remediation Areas
- 12 RFI Soil Sampling Locations/Results
AOC 4 – Conrail Fuel Spill Area
- 13 Geologic Cross Section A-A'
- 14 Groundwater Contour Map – May 2003
- 14A Groundwater Contour Map – May 2003 (E-Size)
- 15 Groundwater Contour Map – July 2003 (B-size)
- 15A Groundwater Contour Map – July 2003 (E-size)
- 15B Groundwater Contour Map – Honeywell Groundwater Monitoring Well
Data - July 2003 (B-size)
- 16 Arsenic Concentrations Along Delaware River
- 17 Summary of Organic Constituents and Arsenic in Groundwater
- 18 South Plant Additional SWMUs/AOCs

IV. APPENDIX A: BORING LOGS AND WELL INSTALLATION DETAILS

**Meeting Presentation
RCRA Corrective Action
RFI Phase I Results and Phase II
Recommendations
General Chemical Corporation
Delaware Valley Facility**

**USEPA Region III/DNREC
November 7, 2003**

1

Presentation Summary

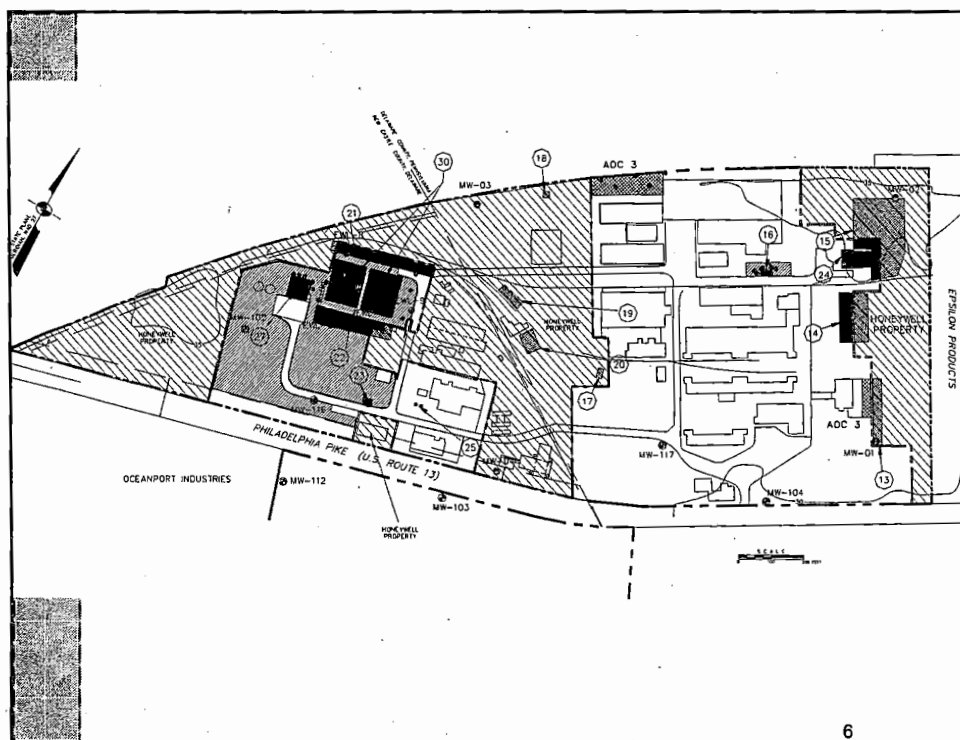
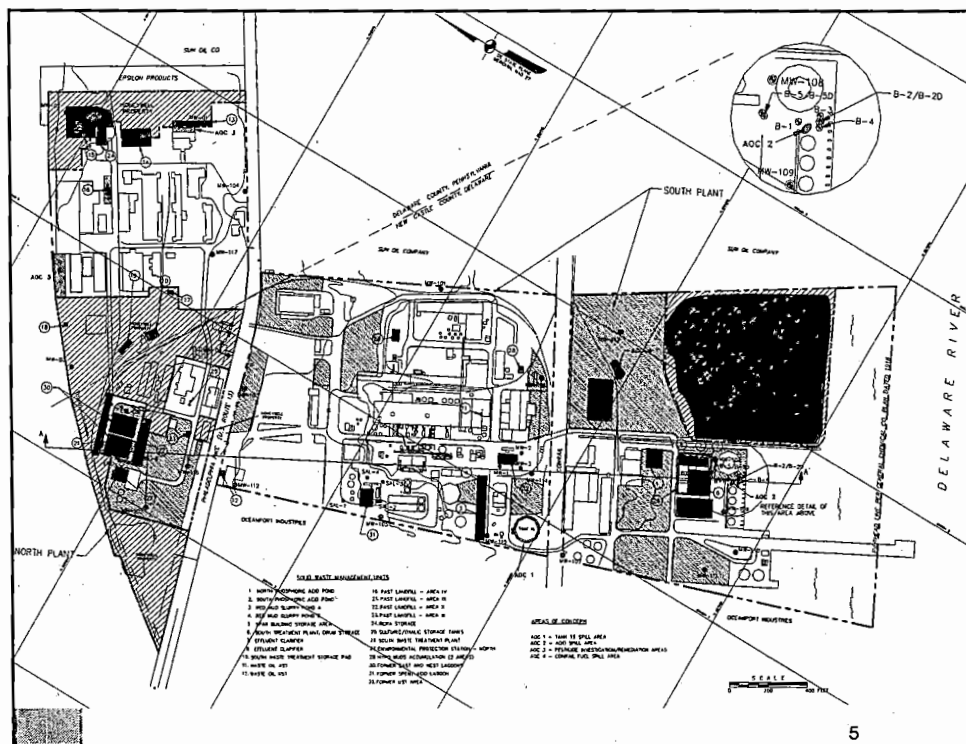
- ✱ RFI Work Plan Objectives
- ✱ RFI Phase I Activities
- ✱ Soil Data Evaluation
- ✱ Groundwater Data Evaluation
- ✱ Additional South Plant AOCs/SWMUs
- ✱ Phase II Summary of Activities

2



RFI Work Plan Objectives

- ✱ Characterize the potential exposure pathway associated with the industrial worker
- ✱ Evaluate groundwater along the southern property boundary and in general interior areas of the Facility to determine potential impact on human and ecological receptors associated with the Delaware River



RFI Phase I Activities

- ✱ Soil Sampling – November 2002
- ✱ Well Installation – November/December 2002
- ✱ Groundwater Sampling (two events)
 - ◆ February 2003
 - ◆ July 2003

7

Soil Sampling Activities

- ✱ Collection of surface soil samples at designated SWMUs/AOCs
- ✱ Test Pit activities associated with SWMUs 16 and 23
- ✱ Split soil samples with USEPA contractor at SWMUs 16 and 23
- ✱ Total Organic Carbon samples from 17 borings

8

Summary of Soil Samples

✱ SWMU 1 – 2 samples	✱ SWMU 27 – 5 samples
✱ SWMU 5 – 4 samples	✱ SWMU 28 – 3 samples
✱ SWMU 16 – 9 samples	✱ AOC 1 – 2 samples
✱ SWMU 21, 22 and 30 – 11 samples	✱ AOC 3 – 7 samples
✱ SWMU 23 – 7 samples	✱ AOC 4 – 2 samples
	✱ Total – 52 samples

9

Well Installation Activities

- ✱ Installation of 17 groundwater monitoring wells; North Plant (4 wells) and South Plant (13 wells)
- ✱ Characterization of the uppermost water-bearing zone
- ✱ Continuous soil sampling from ground surface to water table
- ✱ Well development activities at new and existing wells
- ✱ Well head repair to Wells SAL 3, EWL-5 and EWL-6

10

Groundwater Sampling

- ✧ Initial sampling event implemented week of February 3, 2003
- ✧ Collection of additional round of groundwater levels in May 2003
- ✧ Second sampling event implemented the week of July 7, 2003

11

Approved Modifications to Work Plan – Soil

- ✧ Soil samples were not collected at SWMU 10 due to the presence of intact concrete throughout the SWMU area
- ✧ Soil samples were not collected from SWMU 28-south due to the presence of asphalt paving in this area

12

Approved Modifications to Work Plan - Groundwater

- ✱ Total and dissolved metals analyses were collected at all locations due to turbidity levels (both events)
- ✱ Existing wells B-1, B-3, B-4 and B-5 were resampled during the second event to confirm metals results from first event
- ✱ Monitoring Well B-5D was resampled for metals and the remaining Appendix IX suite to evaluate vertical extent of constituents

13

Approved Modification to Work Plan - Groundwater

- ✱ Existing Wells SAL-1, SAL-3, EWL-5, EWL-6 and EWL-8 were resampled to confirm first sampling event results
- ✱ Dioxin/Furan analyses were performed at EWL-6 to confirm first sampling event results
- ✱ Dioxin/Furan analyses were performed at MW-102 and MW-116 during the second event to evaluate lateral extent relative to EWL-6

14

Soil Data Evaluation

- ✧ Comparison to USEPA Region III Industrial RBC's
- ✧ Acceptable risk range of 10^{-4} to 10^{-6}
- ✧ Inorganic constituent of potential concern – arsenic
- ✧ Organic constituents of potential concern – pesticides (North Plant)

15

Soil Data Evaluation - Arsenic

- ✧ Comparison to USEPA Region III Industrial RBC's (10^{-6}) – **1.9 ppm**
- ✧ Comparison to USEPA Region III Industrial RBC's (10^{-5}) – **19 ppm**
- ✧ Comparison to Accepted Cleanup Levels at other sites

16

USEPA Region III/DNREC Accepted Arsenic Cleanup Levels

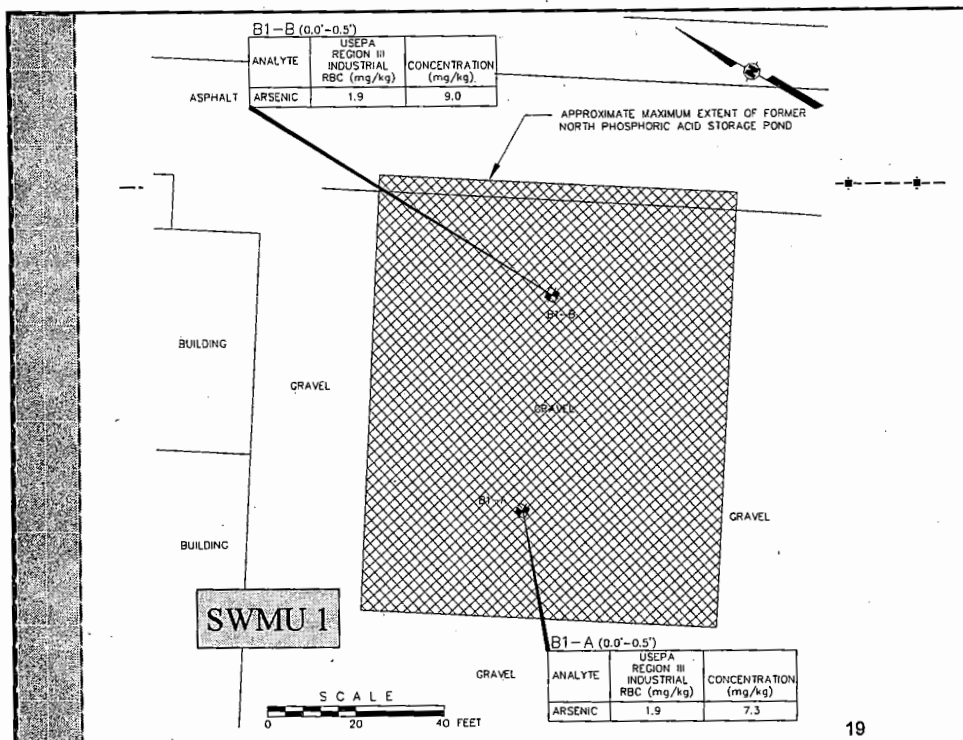
- ✱ **104 ppm** - Sharon Transformer Plant, Sharon, PA (CERCLA – 2000)
- ✱ **38 ppm** – Halby Chemical Co., New Castle, DE (CERCLA, – 1998)
- ✱ **38 ppm** – Potts Property Site, Wilmington, DE (DNREC – 1999)
- ✱ **14 ppm** – Local Background (Potts/Halby)
- ✱ **1 to 10 ppm** – Typical DE Background

17

Soil Data Evaluation - Pesticide

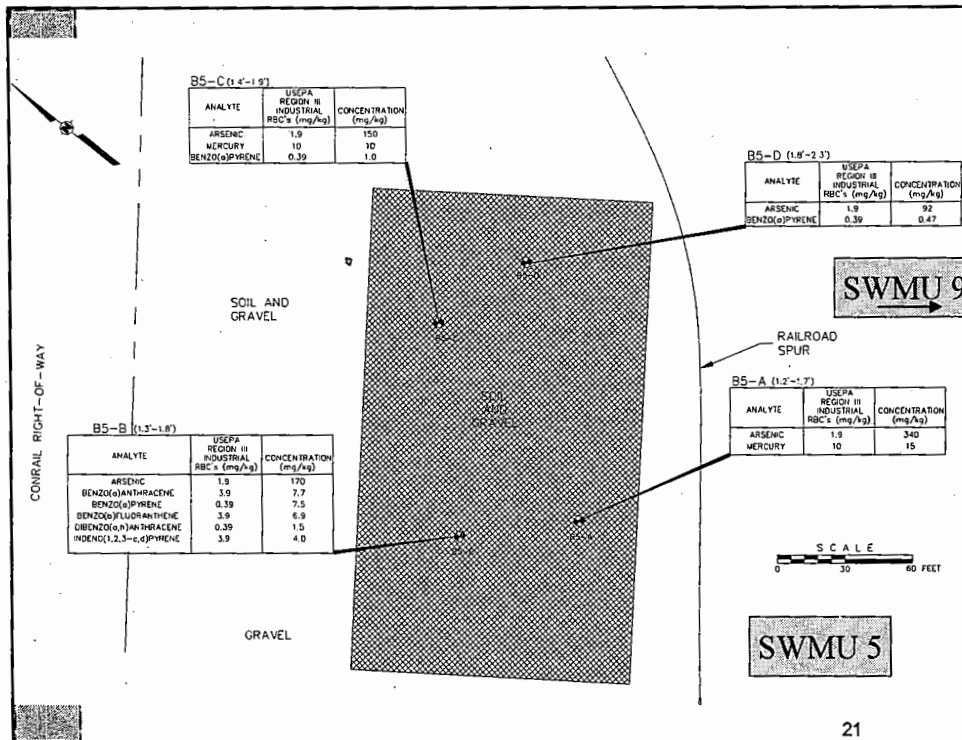
- ✱ Comparison to USEPA Region III Industrial RBC's (10^{-6})
- ✱ Comparison to USEPA Region III Industrial RBC's (10^{-5})
- ✱ Working with Honeywell to develop appropriate cleanup levels

18



Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation			
SWMU 1	<ul style="list-style-type: none"> • Arsenic less than 10 ppm 	<ul style="list-style-type: none"> • Within general background levels • Concentrations are less than 10^{-5} risk • Concentrations are less than other accepted cleanup levels • Only constituent present above 10^{-6} risk level 	<ul style="list-style-type: none"> • No additional work recommended. <i>ok</i>

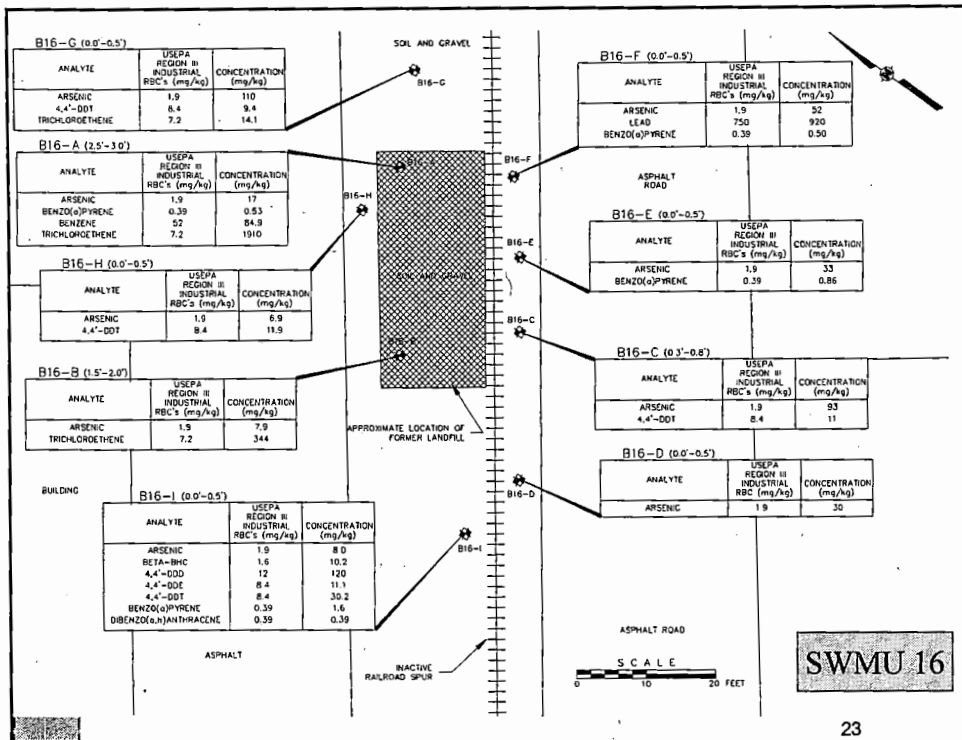
20



Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation			
SWMU 5	<ul style="list-style-type: none"> • Arsenic, 92 to 340 ppm • Mercury, at or slightly above 10 ppm • PAHs (low ppm levels) 		
	Soil samples collected at depth	<ul style="list-style-type: none"> • Arsenic above 10^{-5} and 10^{-6} RBCs • Source of PAHs is likely from asphalt, railroad, or general fill – anthropogenic • Soil quality in this area has likely been influenced by past waste management activities at SWMU No. 9 	<ul style="list-style-type: none"> • Collection of four surface soil samples at previous locations for arsenic and mercury • Collection of 12 additional surface soil samples to define the lateral extent of arsenic and mercury including the area between the railroad spur and SWMU No. 9.

depth?

22

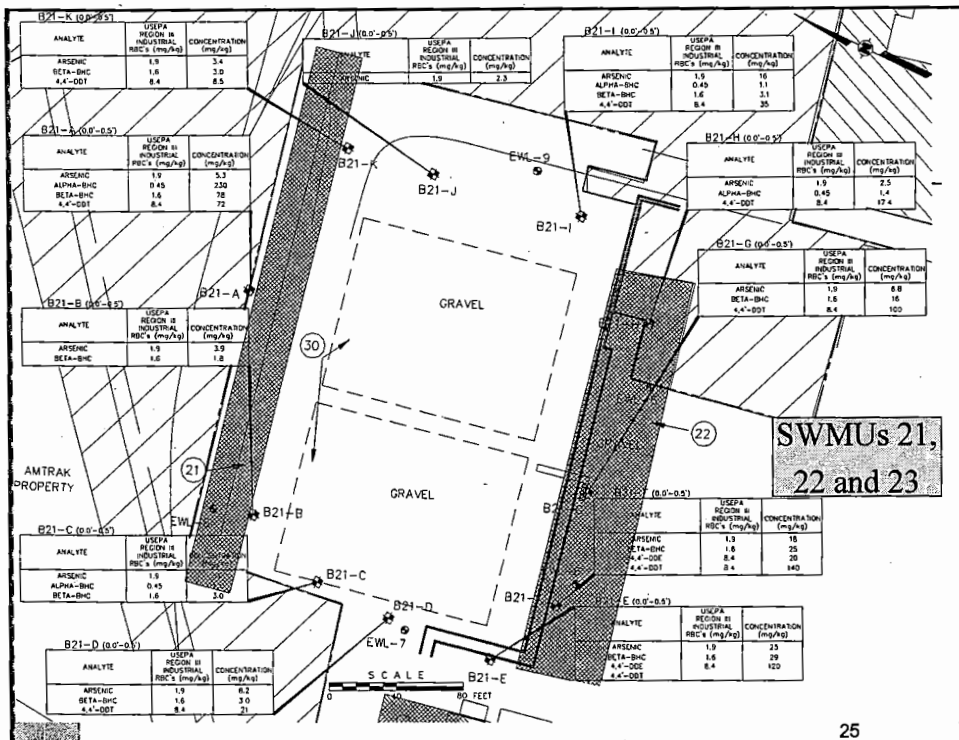


23

Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation Summary

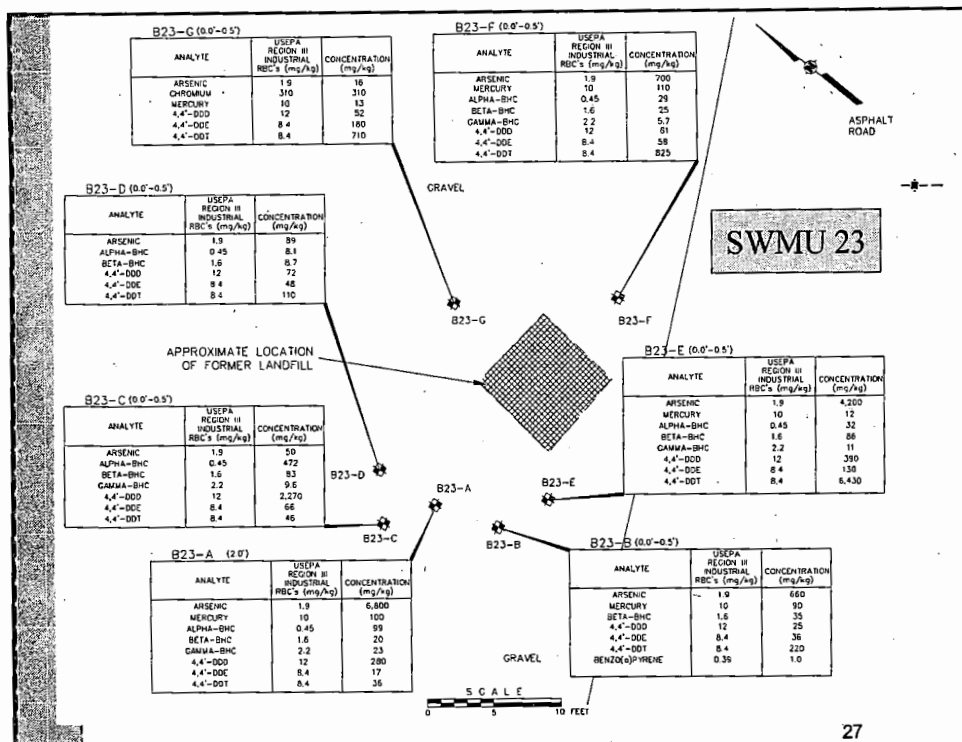
<p>SWMU 16</p>	<ul style="list-style-type: none"> Trichloroethene above RBC in 3 samples (14.1, 344, and 1910 ppm); benzene above in one sample Arsenic above RBC but less than 10 ppm at three locations Arsenic, 19 to 110 ppm at the other six locations Pesticides above RBCs at four locations PAHs (low ppm levels) Lead slightly above RBC at one location 	<ul style="list-style-type: none"> Extent of Past Landfill Area IV defined Two highest TCE concentrations and benzene detected within former landfill area (split samples with USEPA) Only one sample outside source area above TCE 10^{-6} RRBC (B16-G) Asphalt paving in all directions except a 20 foot wide corridor 15 feet NE of B16-G and 30 feet SW of B16-I. Clay layer identified beneath landfill area Disturbance of area resulted in a relatively high level of organic vapors Distribution of As and pesticides do not show pattern associated with past landfill Source of PAHs likely fill/railroad 	<ul style="list-style-type: none"> No further characterization; landfill and adjacent unpaved areas will be addressed using appropriate corrective action measures <p><i>need to address gas partitioning</i></p>
-----------------------	--	--	--

24



Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation Summary

<p>SWMU 21, 22, and 30</p>	<ul style="list-style-type: none"> • Arsenic for most samples below 10 ppm; max. of 25ppm • Pesticides at low levels in most samples; higher levels in 4 samples 	<ul style="list-style-type: none"> • Using a 10⁻⁵ risk RBC results in only 4 locations above RBCs. • Arsenic concentrations below accept cleanup levels • Sampled area and SWMUs are covered with an approximate 6 inch layer of gravel • Concentrations sporadic around unit. • Honeywell property adjacent on three sides • General Chemical property south recently paved • Remaining property south and west unpaved 	<ul style="list-style-type: none"> • No further characterization; landfill and adjacent unpaved areas will be addressed using appropriate corrective action measures <p><i>IF SW OK - paving OK</i></p>
----------------------------	--	--	--



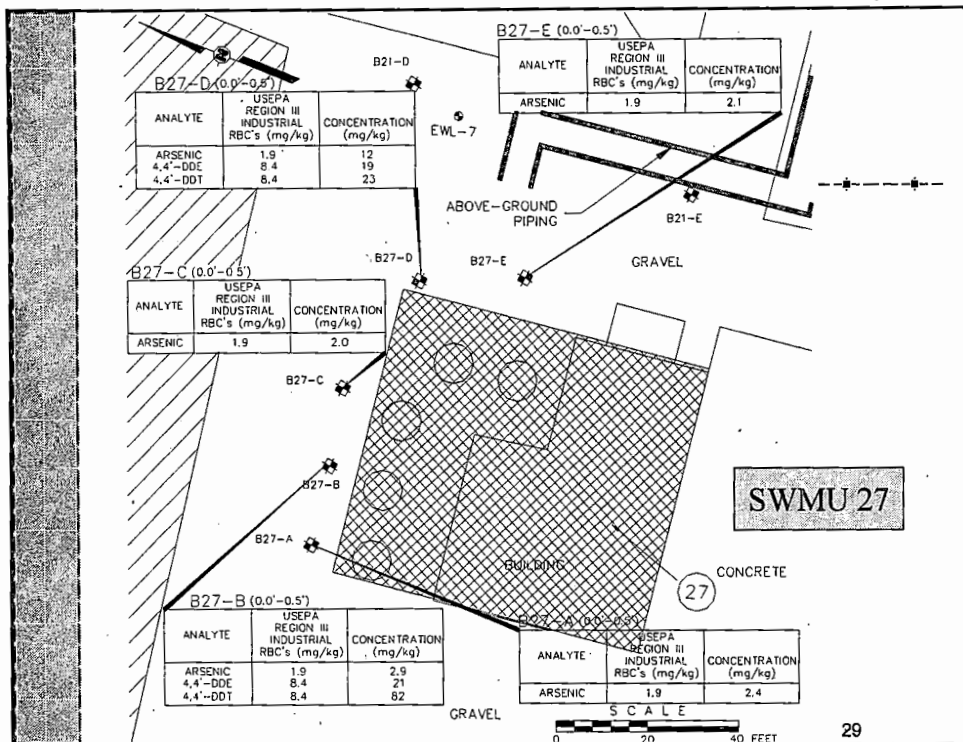
27

Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation Summary

<p>SWMU 23 <i>1/6 to 1/10</i></p>	<ul style="list-style-type: none"> • Arsenic relatively high in several sample locations (660 to 6,800 ppm) • Sample at depth (2.0') had highest concentration • Mercury at 90-110 ppm at three locations • Pesticides in all samples and as high as 2,500 and 6,500 ppm in two of the samples 	<ul style="list-style-type: none"> • Former Landfill Area XI not completely defined based on physical and chemical observations • No distinctive pattern of distribution. • The lateral extent has not been defined for any constituent above RBCs. 	<ul style="list-style-type: none"> • Six 2.0 to 2.5 foot depth samples at previous locations to assist in defining the extent of former landfill area • Collection of soil samples at six additional sampling locations in unpaved areas beyond sampling area. The collection of surface soil and 2.0 to 2.5 foot depth samples at each location to evaluate the lateral extent of relatively high concentrations of arsenic and pesticides in surface soils and further define the extent of the former landfill area • Collection of a soil sample from the 4.5 to 5.0 depth interval at four locations (B23-A, B23-E, B23-F, and B23-G) to evaluate the depth of the former landfill
--	--	--	--

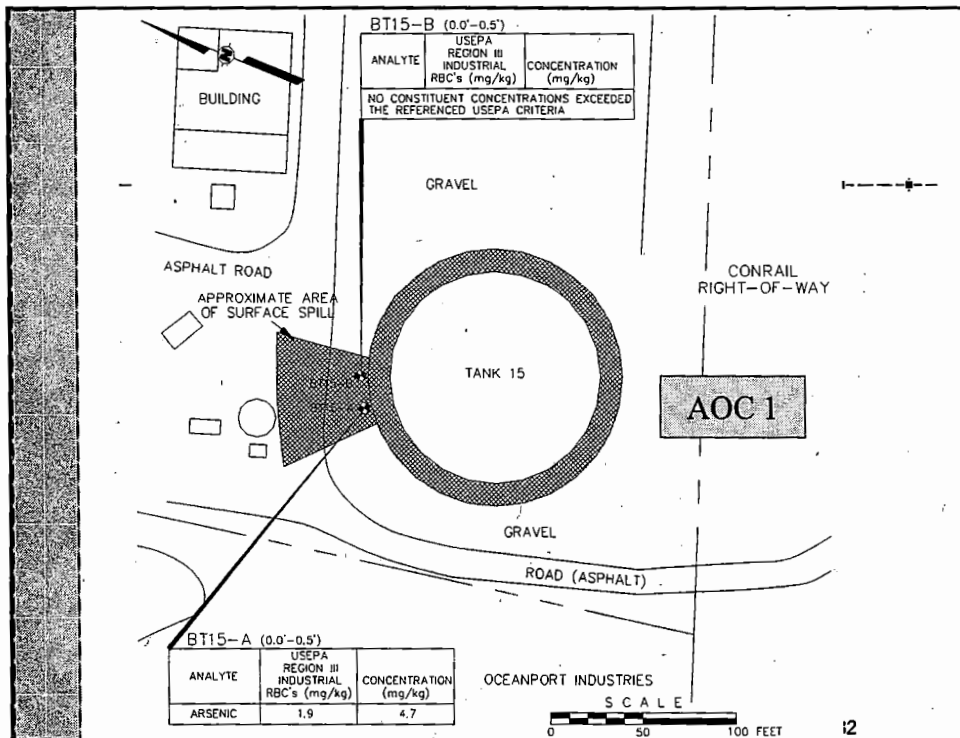
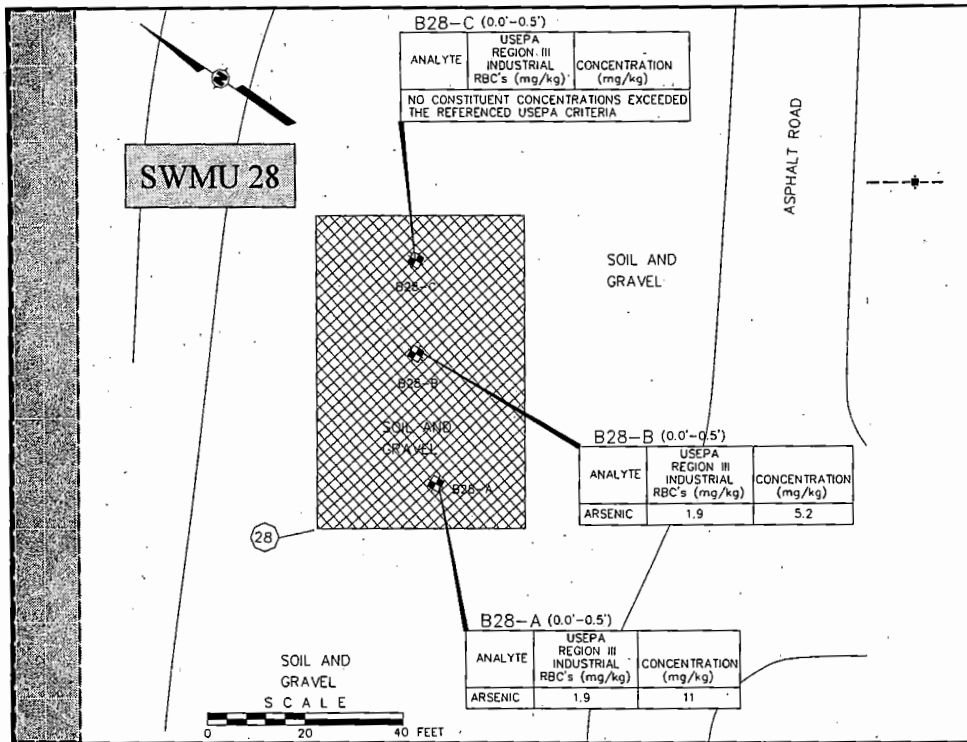
depth to 9'

28



Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation Summary

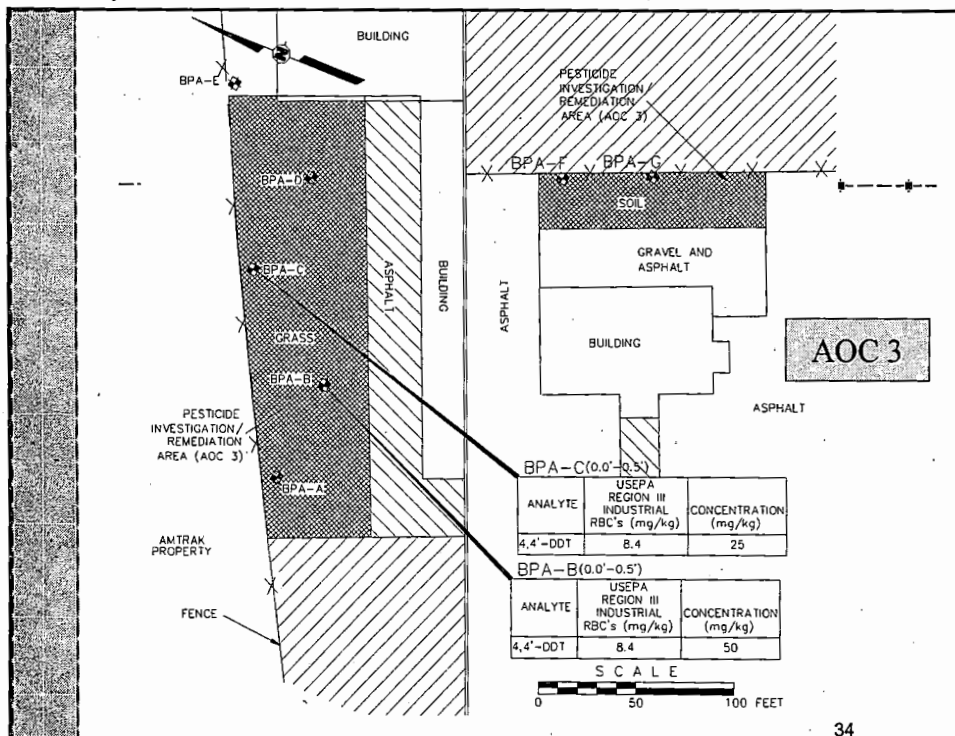
SWMU 27	<ul style="list-style-type: none"> • Arsenic at low levels in each sample (less than 3 ppm except for one sample at 12 ppm) • Pesticides at low levels in three samples 	<ul style="list-style-type: none"> • Sporadic distribution of pesticide concentrations • General Chemical property west and south is generally unpaved • Honeywell property to the north • None of the results above 10^{-5} RBC • Arsenic levels are less than accepted cleanup levels 	<ul style="list-style-type: none"> • No further characterization; adjacent unpaved areas will be addressed using appropriate corrective action measures
---------	---	---	--



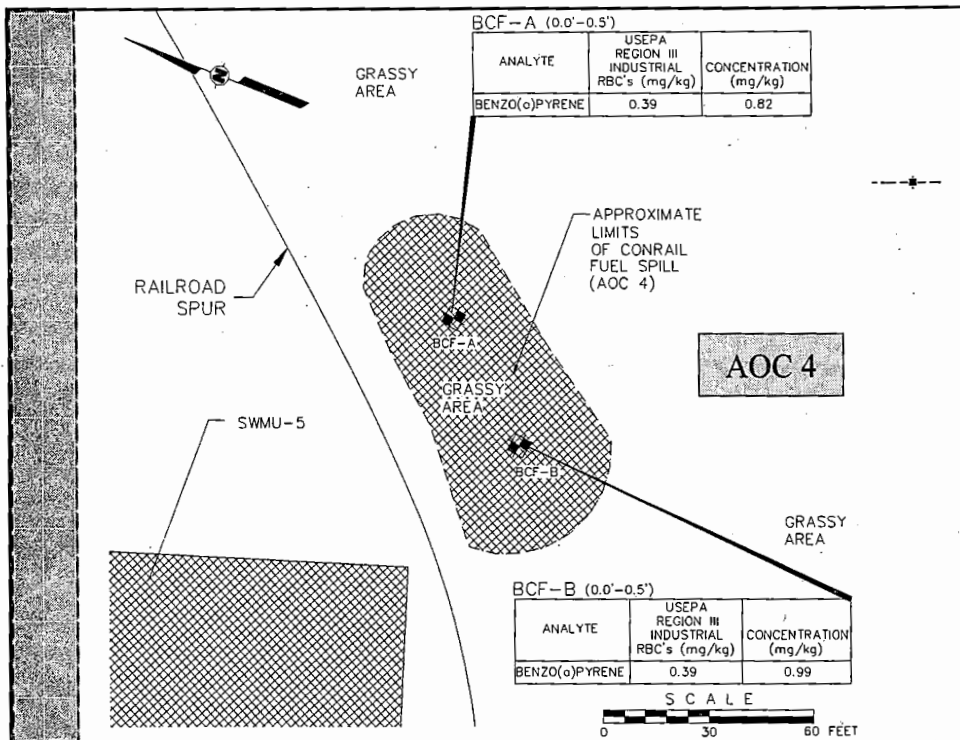
Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation

SWMU 28	<ul style="list-style-type: none"> • Arsenic at low levels (5.2 and 11 ppm) in two of the three samples 	<ul style="list-style-type: none"> • Arsenic levels below 10^{-5} RBC • Arsenic levels are less than accepted cleanup levels • Arsenic levels below background 	<ul style="list-style-type: none"> • No additional work recommended
AOC 1	<ul style="list-style-type: none"> • Arsenic at a low level (4.7 ppm) in one of the two samples 	<ul style="list-style-type: none"> • Arsenic levels below 10^{-5} RBC • Arsenic levels below background • Arsenic levels are less than accepted cleanup levels 	<ul style="list-style-type: none"> • No additional work recommended

33



34



Soil Analytical Results Existing SWMUs/AOCs Data Evaluation/Phase II Recommendation

AOC 3	<ul style="list-style-type: none"> Pesticide 4,4-DDT detected in two of the samples at 25 and 50 ppm. 	<ul style="list-style-type: none"> Pesticide results are less than 10^{-5} RBCs On site extent of pesticides defined in unpaved areas One of the samples containing 4,4-DDT is along the property boundary 	<ul style="list-style-type: none"> Collection of three surface soil samples off-site along the fence line
AOC 4	<ul style="list-style-type: none"> Low level of PAHs in both samples 	<ul style="list-style-type: none"> Source of PAHs is likely from asphalt, railroad, or general fill – anthropogenic PAH results are less than 10^{-5}RBC 	<ul style="list-style-type: none"> No additional work recommended

Groundwater Monitoring System

※ 16 Historical Groundwater Monitoring Wells

- ◆ 5 Wells – Former East/West Lagoons
- ◆ 4 Wells – Former Spent Acid Lagoons
- ◆ 7 Wells – Former Acid Spill Area

※ 17 New Wells Installed By GCC

※ 4 New Wells Installed By Honeywell

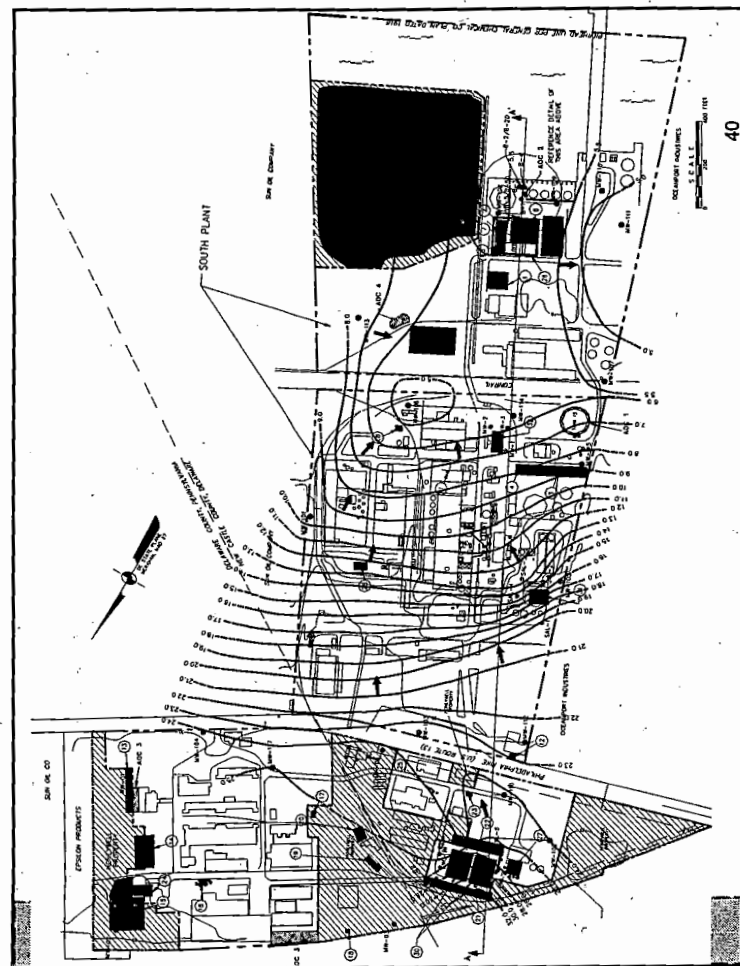
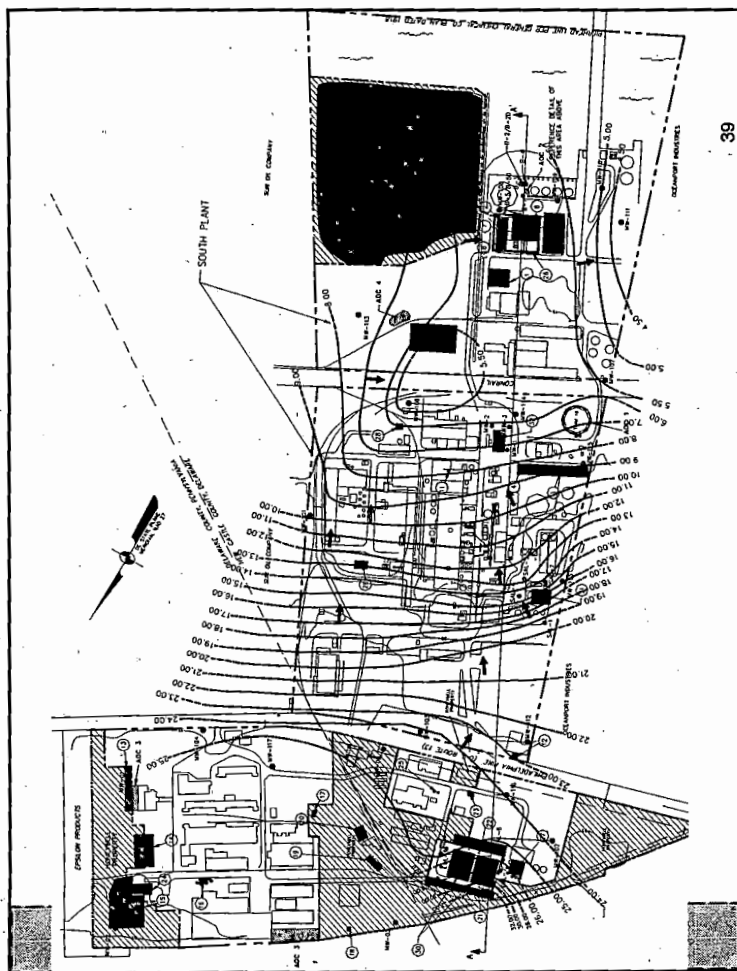
37

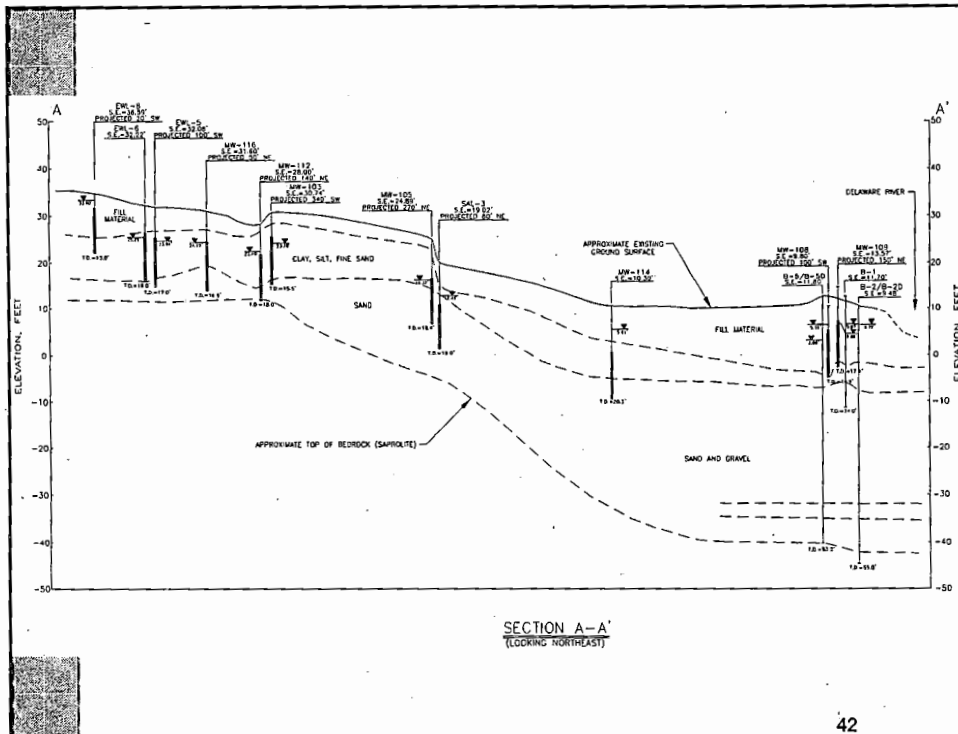
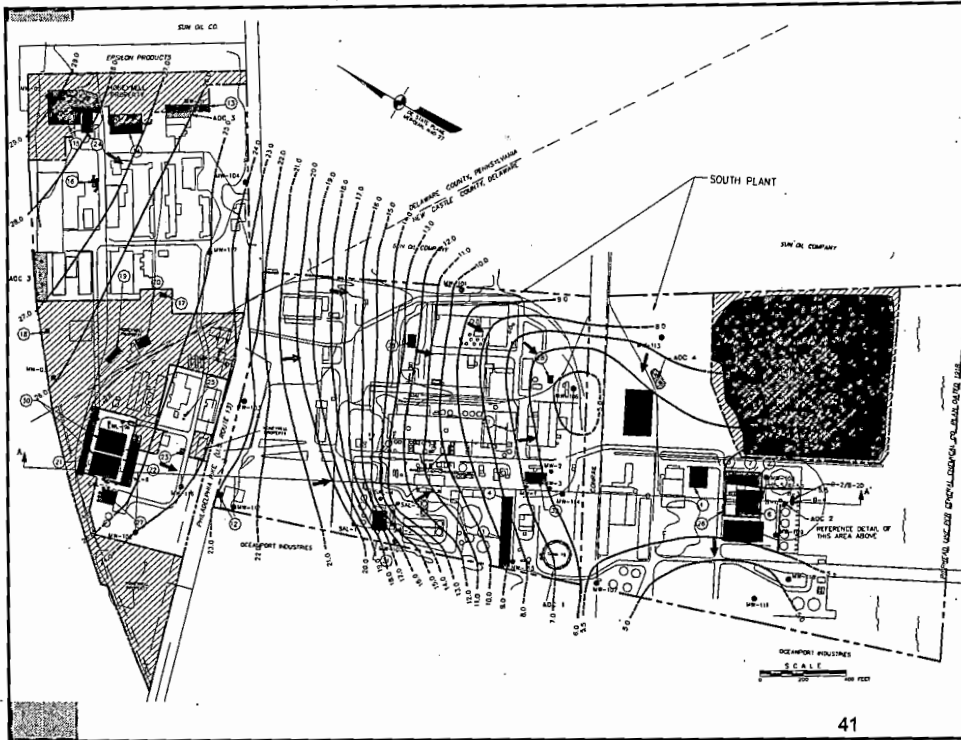
Groundwater Flow

- ※ Water levels measured three separate rounds – similar flow pattern each round
- ※ General flow is from northeast to southwest, perpendicular to Delaware River
- ※ Relatively flat hydraulic gradient, more shallow as it approaches Delaware River
- ※ Apparent deflection near river due to SWMU 9 and/or river system
- ※ Apparent mounding at Well EWL – 8
- ※ Upward hydraulic gradient along Delaware River

*look at
Screen depths*

38





General Groundwater Quality

- ✧ Groundwater quality relatively consistent between February and July Sampling Events
- ✧ Arsenic was detected in Former Acid Spill Area wells along the Delaware River at similar concentrations to those found historically

- 11/11/11

43

General Groundwater Quality

- ✧ Figure 17 provides summary of organic concentrations and arsenic in groundwater
- ✧ Organic constituents were absent or at very low concentrations in existing and new shallow wells along the Delaware River
- ✧ Organic constituents were essentially absent in deep well B-5D.

44

General Groundwater Quality

- ✧ One well contained LNAPL
- ✧ Groundwater quality data indicate minimal migration of constituents from North Plant to South Plant
- ✧ Several wells on the South Plant had relatively high detections of specific VOCs

45

Specific Groundwater Results

Well EWL-8	Need to further evaluate apparent mounding at Well EWL-8	Additional groundwater investigations needed on Honeywell Property hydraulically upgradient of former east and west lagoon area
------------	--	---

46

Specific Groundwater Results

Well MW-102

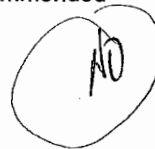
- Distinctive suite of organic compounds at this location; dissimilar to those found at EWL-6 and EWL-8 (carbon tetrachloride, chloroform, nitrobenzene/toluene compounds)
- Source of these compounds in this area is unknown
- Collection of 4 to 6 groundwater samples using geoprobe techniques in the immediate area of Well MW-102 to identify a potential source
- Groundwater samples analyzed for VOCs, SVOC, and pesticides
- Lateral extent to west contingent on additional information on Honeywell Property

47

Specific Groundwater Results

Well SAL-3

- Acetone and MEK at relatively high concentrations
- Based on current and past operations, the source of these compounds is unknown
- Based on surrounding wells the extent of these compounds in groundwater appears very limited
- No off-site migration based on hydraulically downgradient wells
- No additional characterization activities recommended



48

Specific Groundwater Results

Well MW-114

- Benzene concentrations relatively high
- Likely source is past benzyl operations located in the immediate vicinity of the well
- Extent of benzene plume limited based on water quality at downgradient wells
- No off site migration based on existing downgradient wells
- Based on groundwater flow, contaminant migration between this well and the Delaware River may be parallel to the river
- Installation of an additional shallow groundwater monitoring well between MW-107 and MW-111 (Well MW-118)
- Collection of six surface soil samples in unpaved area of past benzyl operations for VOC and SVOC analyses

49

Specific Groundwater Results

Well MW-115

- LNAPL present at well
- Source of LNAPL is unclear; historical operations on Oceanport property, past benzyl operations, fuel storage
- Fingerprint analyses suggests Kerosene or Jet Fuel A
- Arsenic groundwater concentrations relatively high (23 to 40 mg/l); likely source is from operations associated with the former sulfuric acid plant
- Limited in extent based on groundwater quality at site downgradient wells
- Geoprobe investigation (approximately 3 or 4 borings) to evaluate source and extent of LNAPL.
- Depending on results, installation of one inch diameter piezometers for LNAPL measurements

50

Specific Groundwater Results

Well MW-106

- Chlorinated solvents, primarily tetrachloroethene, at relatively high concentrations in groundwater
- Contamination source likely related to past maintenance building/paint storage area activities
- Plume limited based on downgradient groundwater quality
- Off site migration is not occurring based on downgradient groundwater quality
- Based on groundwater flow, contaminant migration between this well and the Delaware River may be parallel to the river
- Installation of an additional shallow groundwater monitoring well between MW-107 and MW-111 (Well MW-118) – (Same as MW-114)
- Collection of six surface soil samples in unpaved areas within the maintenance building and paint shop area for VOC analyses

51

Specific Groundwater Results

Well MW-112

- BTEX compounds at relatively high concentrations in groundwater
 - On site plume limited based on downgradient water quality on GCC property
 - Potential source(s): former UST waste oil tank, vehicle maintenance activities, Oceanport Industries
 - No unpaved areas in this part of the facility
 - No additional groundwater characterization recommended
- NO source?*

52

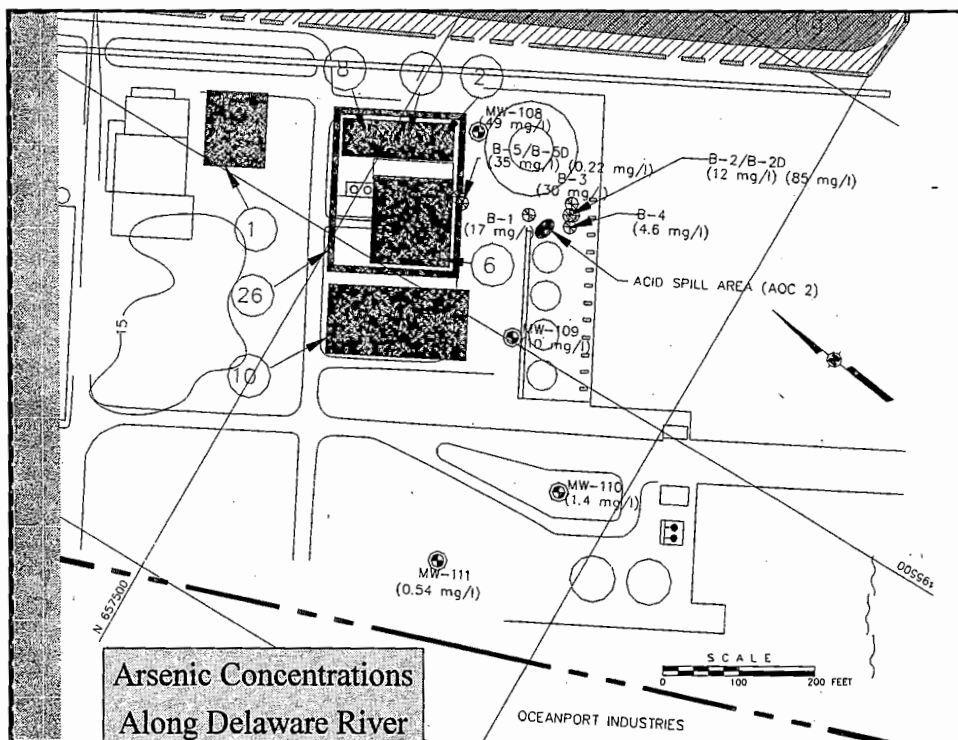
Specific Groundwater Results

Arsenic concentrations in wells along Delaware River

- Arsenic at 50 to 100 ppm levels in several shallow wells, similar to historical concentrations
- Lateral extent of higher arsenic concentrations is defined on GCC property
- Vertical extent of arsenic is limited based on concentrations in Well 5D; support for upward flow gradient along the river
- Potential sources: former acid spill area, AST acid storage tank, or SWMU 9
- SWMU 9 groundwater concentration of 100 ppm

- Review results of decontamination activities in this area
- Assumes monitoring well information within/adjacent to SWMU 9 to evaluate SWMU as a potential source of higher arsenic concentrations
- Collection of 5 surface soil samples in the unpaved area between the former sulfuric acid storage tank area and SWMU 9

53



Specific Groundwater Results

Low levels of pesticides in South Plant Groundwater

- Appears regional based on distribution
- Low levels of pesticides in upgradient/background wells
- Higher concentrations along Conrail line (except SAL-3)
- Primary pesticides are alpha/beta BHC

- No additional activities recommended

55

Specific Groundwater Results

Vertical Extent of Constituents

- Depth to bedrock across the site will dictate whether the next deepest groundwater zone to be monitored is in bedrock or alluvium
- Well B-5D provides groundwater quality data at depth along the Delaware River; Well B-2D does not represent groundwater quality at depth in this area
- Groundwater elevation data indicates a fairly strong upward flow gradient along the river

- Review available geotechnical drawings (Honeywell and General Chemical) for depth to bedrock information
- Honeywell to determine deep well locations on the North Plant
- GCC to install four deep wells in the south plant adjacent to Wells MW-110, MW-112, MW-115 and MW-118.

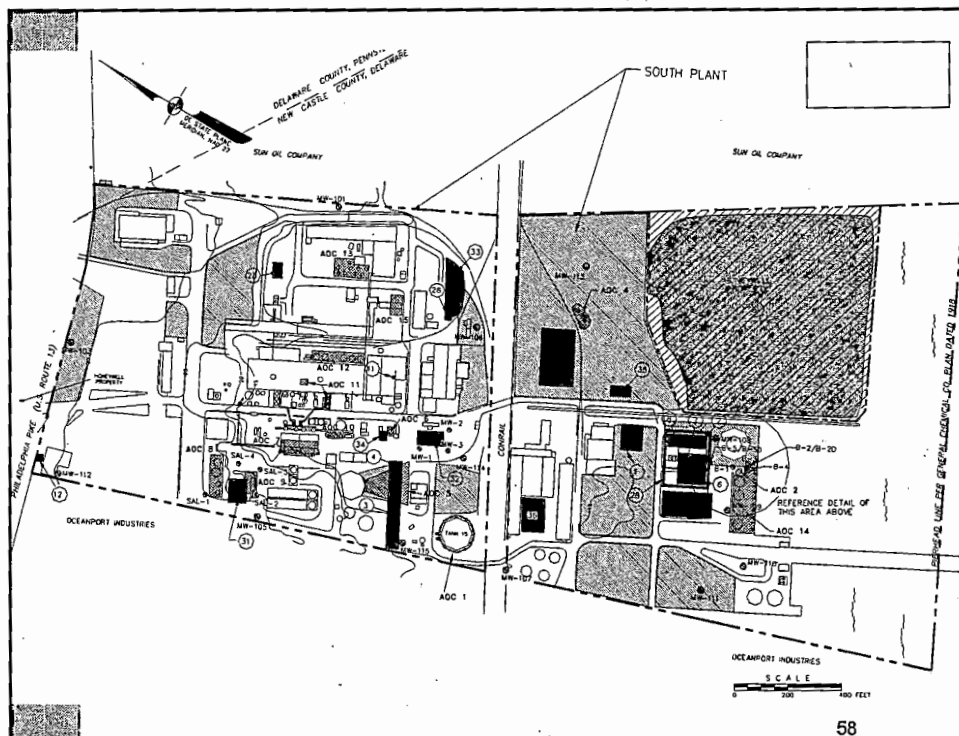
↓
not
true
MAP

56

Additional SWMU/AOC Definition – South Plant

- ✱ Areas of potential waste management activities
- ✱ Unpaved areas within former operational areas that based on visual inspection may have resulted in a release to soil
- ✱ Sumps within former active AST areas
- ✱ Tanks without secondary containment with release history

57



58

Additional South Plant SWMUs/AOCs

SWMU /AOC	Description	Recommended Scope of Work	Analytical Program
SWMU 33	Former Spray Pond Area	Area is paved with asphalt. No additional work proposed	Not Applicable
SWMU 34	Former Waste Oil Storage Pad	Two surface soil samples adjacent to the pad, one sample from each of the two sides that are unpaved	Metals, VOCs, SVOCs, PCBs
SWMU 35	Former Hazardous Waste Storage Pad	Four surface soil samples adjacent to pad, one sample from each side of the pad	Metals, VOCs, SVOCs, PCBs

59

Additional South Plant SWMUs/AOCs

SWMU 36	Debris Staging Area	Area is paved. No additional work proposed	Not Applicable
AOC 5	Former Sulfur Storage Tank Spill	Five surface soil samples within the unpaved portion of the former spill area	Metals, pH
AOC 6	Above Ground Fuel Storage Tank	The secondary containment area will be inspected following completion of facility decontamination activities. If unpaved, then four surface soil samples will be collected. If paved, then the containment area will be inspected for significant deterioration or cracking. If areas are identified, a maximum of four surface soil samples will be collected at these locations.	Metals, VOCs, SVOCs

60

Additional South Plant SWMUs/AOCs

AOC 7	Former Sulfuric Acid Plant Area	Six surface soil samples will be collected in an unpaved area adjacent to former operations	Metals, pH
AOC 8	Former Spent Sulfuric Acid Loading and Unloading Area Sump	Inspect sump following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, VOCs, SVOCs pH
AOC 9	Former Spent Sulfuric Acid (Flammable) Storage Area Sump	Inspect sump following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, VOCs, SVOCs pH

61

Additional South Plant SWMUs/AOCs

AOC 10	Former Acid Plant Area – Acid Storage Area Sumps A and B	Inspect sumps following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals pH
AOC 11	Former Contact Sulfuric Acid Plant Area A – Sumps A and B	Inspect sumps following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals pH

62

Additional South Plant SWMUs/AOCs

AOC 12	Former Contact Sulfuric Acid Plant Area B – Sumps A and B	Inspect sumps following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, pH
AOC 13	Former Photo Salts Plant Area Sumps A and B	Inspect sumps following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, pH

63

Additional South Plant SWMUs/AOCs

AOC 14	Former Sulfuric Acid Tank Storage Area Sump	Inspect sump following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, pH
AOC 15	Former Acid Loading/Unloading Area Sump	Inspect sump following decontamination activities. If conditions indicate a potential significant release, then a surface soil sample will be collected beneath the sump	Metals, pH

64

Summary of RFI Phase II Activities

✱ Phase II Soil Activities (Existing SWMUs/AOCs)

- ◆ **SWMU 5** – 16 surface soil samples for As and Hg
- ◆ **SWMU 23** – 22 surface or subsurface soil samples for As, Hg and pesticides
- ◆ **AOC 1** – 3 surface soil sample for pesticides

65

Summary of RFI Phase II Activities

✱ Phase II Soil Activities (New SWMUs/AOCs)

- ◆ **SWMU 34** – 2 surface soil samples for metals, VOCs, SVOCs, and PCBs
- ◆ **SWMU 35** – 4 surface soil samples for metals, VOCs, SVOCs, and PCBs
- ◆ **AOC 5** – 5 surface soil samples for metals, pH
- ◆ **AOC 7** – 6 surface soil samples for metals, VOCs, SVOCs and pH

66

Summary of RFI Phase II Activities

* Soil Sampling Based on Groundwater Results

- ◆ **Well MW-114 Area** - 6 surface soil samples for VOC and SVOC analyses
- ◆ **Well MW-106 Area** - 6 surface soil samples for VOC analyses
- ◆ **Arsenic along River** - 5 surface soil samples for Arsenic analyses

67

Summary of RFI Phase II Activities

* Phase II Groundwater Activities

- ◆ **Well MW-102** - 4 to 6 groundwater samples using a geoprobe and analyses for VOC, SVOCs and pesticides
- ◆ **Well MW-115** - 3 to 4 geoprobe borings and installation of one-inch diameter piezometers
- ◆ **Well MW-114/106** - Installation of additional shallow well (MW-118) and sampling for Appendix IX constituents
- ◆ **Deep Wells** - Installation of 4 deep wells in the South Plant and sampling for Appendix IX constituents

68

Summary of RFI Phase II Activities

✱ **Phase II Soil Activities** (summary)

- ◆ Minimum of 75 soil samples at existing or new SWMU/AOCs, or monitoring well areas
- ◆ Additional soil samples possible based on field inspection following specific plant decommissioning activities

✱ **Phase II Groundwater Activities** (summary)

- ◆ Installation of 1 shallow and 4 deep monitoring wells
- ◆ Drilling of 7 to 10 geoprobes
- ◆ Collection of 5 groundwater monitoring well samples
- ◆ Collection of 4 to 6 geoprobe groundwater samples